

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:  
Davis, et al.

For: Method and Apparatus for Providing  
a Hazardous Material Alert

Serial No.: 10/663,405

Group Art Unit: 2636

Filed: September 16, 2003

AMENDED APPELLANT'S BRIEF

Mail Stop Appeal Brief  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Attention: Board of Patent Appeals and Interferences**

This following appeal brief is hereby submitted following Appellant's Notice of Appeal, filed on May 18, 2006 and further in response to the Notification of Non-Compliant Appeal Brief.

**REAL PARTY IN INTEREST**

The real party in interest is Qualcomm Incorporated, located at 5775 Morehouse Drive, San Diego, California 92121.

**RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

**STATUS OF THE CLAIMS**

1. The total number of claims pending in this application is 20.
2. Claims 1- 20 stand rejected
3. Claims 1-20 are on appeal.

**STATUS OF AMENDMENT**

There have been no amendments filed in the present case since the issuance of the Examiner's final action of April 25, 2006.

**SUMMARY OF CLAIM SUBJECT MATTER**

Claims 1, 9, 13, and 17 are independent claims. Claims 9, 10, 11 and 12 contain means-plus-function limitations. A concise explanation of the subject matter of these claims is provided below:

Claim 1: This claim is directed to a method for providing a hazardous material alert for use with a vehicle that is transporting hazardous material, the method comprising the steps of detecting a hazard event (paragraph 0035, page, 9, lines 3-4); and transmitting the hazardous material alert in response to the hazard event (paragraph 0047, page 12, lines 22-23) , wherein the hazardous material alert includes information relating to the hazardous material (paragraph 0047, page 12, lines 26-32) and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event (paragraph 0023, page 5, lines 32-34 and paragraph 0027, page 6, lines 30-33).

Claim 9: This claim is directed to an apparatus for providing a hazardous material alert for use with a vehicle that is transporting hazardous material , the apparatus comprising

means for detecting a hazard event (202, 214, 216); and means for transmitting (210) the hazardous material alert in response to the hazard event, wherein the hazardous material alert includes information relating to the hazardous material (paragraph 0047, page 12, lines 26-32) and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event (paragraph 0023, page 5, lines 32-34 and paragraph 0027, page 6, lines 30-33).

Claim 13: This claim is directed to an apparatus for providing a hazardous material alert for use with a vehicle that is transporting hazardous material, the apparatus comprising detection logic (202) for receiving an indication that a hazard event has occurred (paragraph 0041, page 10, lines 29-30); and transmission logic (202, 206) coupled to the detection logic (paragraph 0011, page 3, lines 18-22), the transmission logic operating to initiate a transmission of hazardous material alert in response to the hazard event (paragraph 0047, page 12, lines 22-26), wherein the hazardous material alert includes information relating to the hazardous material (paragraph 0047, page 12, lines 26-32) and wherein the transmission includes a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event (paragraph 0023, page 5, lines 32-34 and paragraph 0027, page 6, lines 30-33)..

Claim 17: This claim is directed to a computer-readable medium (paragraph 0012, page 3, lines 23-25) comprising instruction for execution by a hazard detection system that is used with a vehicle transporting hazardous material, the instructions, when executed by the hazardous detection system, cause a hazardous material alert to be transmitted, (paragraph 0012, page 3, lines 25-29) the computer-readable media comprising: instructions for detecting a hazard event; (paragraph 0012, page 3, lines 26-27) and instructions for transmitting the hazardous material alert in response to the hazard event (paragraph 0012, page 3, lines 27-29) , wherein the hazardous material alert includes information relating to the hazardous material (paragraph 0012, page 3, lines 27-29) and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event (paragraph 0023, page 5, lines 32-34 and paragraph 0027, page 6, lines 30-33).

**GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1, 9, 13 and 17 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.
2. Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Roach (U.S. Patent No. 6,580,367 B2) in view of Frese et al. (U.S. Patent 6,472,771 B1).

**ARGUMENTS**

Rejections under 35 U.S.C. § 112, first paragraph

Claims 1, 9, 13 and 17 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.

35 U.S.C. § 112 requires a specification that contains a “written description in such full, clear, concise and exact terms as to enable any person skilled in the art...to make and use “the invention.

The Office action dated 04/25/06 has taken issue with the word “directly.” It is posited in the Office action that there is no recitation in the specification of “direct transmission of the hazard alert to emergency personnel responding to the hazard event.” However, the specification states the following at paragraph 0027:

The hazardous material alert may be received by emergency and rescue personnel to allow such responders to determine the vehicle's location, type of hazardous cargo, status of cargo, containment and/or/treatment procedures or any other information concerning the vehicle or hazardous cargo.

Further, at paragraph 0023 the specification states the following:

In other embodiments, the MCT may communicate directly (emphasis added) with interested parties, such as remote locations 104 and 106 without communicating through remote location 102.

In paragraph 0021, remote location 102 is identified as a central processing center "otherwise known as a central station, hub or network management center (NMC), and serves as a central communication point between MCT-equipped vehicles and their respective dispatch centers other designated office(s), shippers, consignees, governmental authorities, family members, and so on." The impact of paragraph 0023 on paragraph 0027 in view of paragraph 0021 is that hazard alert communications from the MCT can be directly received by an interested third party, whereby the interested third party has been defined authorities in paragraph 0021 to include government authorities. Emergency personnel responding to a hazard generally do so under auspices of a government entity. A person of ordinary skill in the art (and incidentally, any person) has been virtually programmed to contact a government authority, e.g. police, in connection with being subject to or witnessing an ever present road hazard. The same would occur here and it would be understood by those of ordinary skill in the art that some governmental authority would be responding to a present hazardous situation involving a vehicle. To doubt that the governmental authority would be that entity responding to the hazard begs the question, "Who else would be called?" The cited art, at best can only provide an indirect path, e.g., through a dispatcher, etc. For instance, in the cited reference Roach (6,580,367) it is stated that

A further object of the present invention is to provide a [sic] information dispatch system which allows the receiving central command control center to notify and dispatch needed rescue, medical personnel, police and fire personnel ...

Roach, a reference for rejection under 35 U.S. C. § 103(a) in this passage identifies the government authorities/ emergency personnel. Roach simply fails, as the Office action points out at page 5, to specifically teach the limitations of transmitting a hazard alert directly received by emergency personnel, as recited in claims 1, 9, 13, and 17. However, the value of directly contacting emergency personnel responding to a hazard event immediately becomes more evident as the criticality of the exigency increases. The invention, as recited in claims 1, 9, 13 and 17, sets out a way to accomplish such a task in a manner calculated to result in the quickest possible response. From these cited passages, it is clear that communication is taught in the specification that can occur between the MCT (mobile

station) and interested parties (paragraph 0027), defined as government authorities (e.g. emergency personnel as distinguished from, for instance a commercial trucking dispatcher).

It is well settled that claims are to be read in light of the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). Further, during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). "Reasonableness" is a necessary requirement in considerations involving patent law. Moreover, it provides a cornerstone upon which English and American Common Law is based. It is clearly set out in the specification that a central processing center can be bypassed and that direct communications can occur between a mobile communications terminal (carried in a vehicle) and a third party defined as (governmental authorities) emergency personnel responding to the hazardous event. To interpret the claims in a manner which considers this interpretation of the specification as "too broad to include such a finite limitation" (Page 2, line 16 of the April 25, 2006 Office action) is submitted by appellants as being unreasonable.

Figure 1 further illustrates the transmission "directly received by emergency personnel" as recited in claims 1, 9, 13, and 17. Incidentally, the fact that satellite 108 is shown in the transmission path is of no significant consequence. "Direct" (directly) can be distinguished from indirect (indirectly) on the basis of the processing which occurs. For instance, in the case of forwarding the hazard alert to a live dispatcher, necessarily a more significant delay will result in getting a response from emergency personnel due to the intake and coordination of information required in connection with processing information by a person. Consequently, figure 1 illustrates one aspect of the transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event. Several bases of support are therefore provided by the specification including verbal, logical, reasonable, and visual bases. This spans the full gamut of description and appellants respectfully submit that claims 1, 9, 13 and 17 full comply with the written description requirement of 35 U.S.C. § 112, first paragraph.

Rejections under 35 U.S.C. U.S.C. 103(a)

The rejection of claims 1-20 under 35 U.S. 103 (a) as being unpatentable over Roach in view of Frese et al. is respectfully traversed. Frese does not supply, either directly or by inference, the step of providing communication to emergency personnel. No such step is found because no such disclosure is made. In fact, fleet management purposes as suggested in the Office action and listed in Table 1 of Frese do not provide this step and the firewall that protects the vehicle from unauthorized access at column 3, lines 43-45, actually teaches away from an interpretation of dissemination of information to emergency personnel. This fact is further emphasized at column 4, lines 62-67 of Frese. There, it states that "a separation between vehicle-specific data that can or should be utilized by the vehicle owner, and data that should only be accessible for authorized groups such as vehicle manufactures, suppliers, the garage, etc. can be implemented in a simple manner." There is no provision made in Frese for emergency personnel of any capacity. The interpretation given Frese in the 4/25/06 Office action requires attributing interpretations to Frese that are in a realm of abstraction outside of that which would be attributed by those of ordinary skill in the art. The unsupported statement on page 5 of the 4/25/06 Office action that "[Frese] This reference...combined with the teachings of Roach is well known and therefore would have been obvious to incorporate such teaching..." fails to even set forth the proper premise upon which a conclusion can be based. The admitted fact in the Office action that Roach doesn't teach transmission of hazard alert that can be directly received by emergency personnel combined with the alleged vehicle-to vehicle communications of Frese, falls far short of teaching or suggesting "sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event as recited in claims 1, 9, 13 and 17. The conclusion results through a non sequitur. It does not logically follow. Roach maintains at column 8, lines 49-54 that analyzed signals are provided to a data terminal 68 for alerting an operator (e.g., someone at a dispatch station) as to the emergency situation. The operator is then able to analyze the situation and contact the appropriate emergency personnel to handle the situation. We live in an increasingly dangerous world. All manner of items are transported by truck. This includes hazardous material including munitions. Other than certain markings on the outside of a vehicle which may give some hint as to the nature of its cargo, it is difficult to discern what a vehicle may be carrying. It should also be appreciated

that while "sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event" as set forth in the independent claims, may involve vehicle-to vehicle communications, this language also covers transmissions to anyone representative of the emergency personnel involved in the response . This includes a police or fire dispatcher, etc. and is not limited to someone in another vehicle. The approach herein and claimed eliminates the response time associated with and the necessity for the operator as described in Roach -i.e., the commercial dispatcher. Further, the troubles which can be involved with the dispatch of emergency personnel are well documented. Adding yet another person to the process, e.g. the operator of Roach, can further exacerbate potential problems. A transmission directly received by emergency personnel as recited in the independent claims lessens this problem and, in and of itself, provides a basis for patentability of these claims and the claims dependent therefrom.

The following scenario demonstrates the benefits of the invention as recited in claims 1, 9, 13 and 17:

Imagine a traffic accident involving a tractor-trailer vehicle transporting hazardous chemicals which react with oxygen to form a very deadly gas. Perhaps the volatility of the chemicals is greatly lessened by maintaining the chemicals below a certain threshold temperature lower than that of the ambient temperature surrounding the trailer. Consequently, the trailer is refrigerated. However, as the chemicals slowly spill out onto the roadway, and as the refrigeration unit on the trailer, damaged by the accident, begins to fail, the severity of the hazard increases as a function of time and distance from the trailer. A driver in a vehicle 400 miles away may not appreciate the benefits provided by the invention as claimed. However, if the driver of the third vehicle in the traffic jam behind the accident only knew of the imminent danger ahead, one could be certain that that driver would fully appreciate the benefit in providing a speedy alert to authorities, as is possible with appellants' invention as claimed. As with most things, this is a matter of perspective. Those upon which the invention can bestow a benefit will benefit the most. Article I, Section 8 of the Constitution provides that, "The Congress shall have the power... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." The invention as claimed is the type for which the protection of a patent was meant to cover.



*Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) sets forth three central factors to be considered in applying 35 U.S.C. §103: namely, the scope and content of the prior art; the differences between the prior art and the claims at issue; and the level of ordinary skill in the pertinent art. Secondary factors to be considered include objective evidence (e.g., commercial success, long felt need, etc. While the insufficiencies of the prior art and the skill of one of ordinary skill in the art have been discussed, the need addressed and the problem solved by the invention provides the type of secondary consideration contemplated in *Graham v. John Deere Co.* Id. at 35-36. A true need exists for this invention along with an incentive to produce it as would be encouraged through the grant of patent protection.

There is no teaching or suggestion within Frese which would warrant its combination with Roach. The converse is also true (e.g., no teaching in Roach to warrant its combination with Frese). Thus, even if Frese were to stand for vehicle to vehicle communications, there is no indication that Frese teaches, suggests or makes obvious communication with emergency personnel when considered with Roach or vice versa. Frese's communications are very specifically set out. Roach also very specifically details what parties are in communication. Only in light of appellant's specification and claims can one derive direct communication with emergency personnel. For these reason, it is submitted that the combination of Roach with Frese is improper and that such combination fails to teach, suggest or make obvious the limitations regarding transmitting the hazardous material alert including sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event, as recited in claim 1, 9, 13 and 17. Consequently, claims 1, 9, 13 and 17 are submitted as being patentably distinguishable from Roach, Frese or any combination thereof.

Appellants submit that as shown by the apparent refusal to recognize and appreciate the significance of the "directly received" language in the independent claims, the Office action fails to impart the proper meaning of the claims as set out in the Office action analysis of Roach, Frese and their combined teachings.

Given these factors, the 35 U.S.C. §103(a) rejection is clearly improper under Federal Circuit tests and under the long established Supreme Court finding in *Graham v. John Deere* as well.

Claims dependent from claims 1, 9, 13 and 17 depend from claims submitted herein as patentably distinguishable over the cited. It is submitted that these dependent claims are likewise patentably distinguishable as they merely contain limitations in addition to the claims from which they depend.

**CONCLUSION**

In view of the foregoing, Appellants respectfully request that all presently outstanding rejections be reversed, and that all claims under appeal be allowed.

Respectfully submitted,

Dated: March 28, 2007

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APPENDIX OF CLAIMS

1. A method for providing a hazardous material alert for use with a vehicle that is transporting hazardous material, the method comprising the steps of:  
detecting a hazard event; and  
transmitting the hazardous material alert in response to the hazard event, wherein the hazardous material alert includes information relating to the hazardous material and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event.
2. The method of claim 1, wherein the hazard event is detected from a condition of the vehicle.
3. The method of claim 1, wherein the hazard event is detected from an input received from a vehicle operator.
4. The method of claim 1, wherein the hazard event is detected from a message received from a remote location.
5. The method of claim 1, wherein the hazardous material alert has a range of less than 1000 feet from the vehicle.
6. The method of claim 1, wherein the step of transmitting further comprises a step of transmitting the hazardous material alert using one or more transmitters selected from AM, FM, CB and Police band transmitters.
7. The method of claim 1, further comprising a step of activating one or more vehicle systems in response to the hazard event.
8. The method of claim 1, further comprising a step of activating one or more vehicle systems in response to the hazard event.

9. Apparatus for providing a hazardous material alert for use with a vehicle that is transporting hazardous material, the apparatus comprising:

means for detecting a hazard event; and  
means for transmitting the hazardous material alert in response to the hazard event, wherein the hazardous material alert includes information relating to the hazardous material and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event.

10. The apparatus of claim 9, wherein the means for detecting the hazard event comprises means for detecting the hazard event from a condition of the vehicle.

11. The apparatus of claim 9, wherein the means for detecting the hazard event comprises means for detecting the hazard event from a message received from an operator input.

12. The apparatus of claim 9, wherein the means for detecting the hazard event comprises means for detecting the hazard event from a message received from a central station.

13. Apparatus for providing a hazardous material alert for use with a vehicle that is transporting hazardous material, the apparatus comprising:

detection logic for receiving an indication that a hazard event has occurred; and  
transmission logic couple to the detection logic, the transmission logic operating to initiate a transmission of hazardous material alert in response to the hazard event, wherein the hazardous material alert includes information relating to the hazardous material and wherein the transmission includes a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event.

14. The apparatus of claim 13, wherein the detection logic comprises input logic to receive an operator input, and wherein the hazard event is detected from the operator input.

15. The apparatus of claim 13, wherein the detection logic comprises input logic to receive vehicle sensor input, and wherein the hazard event is detected from the vehicle sensor input.

16. The apparatus of claim 13, wherein the detection logic comprises input logic to receive a message from a central station, and wherein the hazard event is detected from the message from the central station.

17. A computer-readable medium comprising instruction for execution by a hazard detection system that is used with a vehicle transporting hazardous material, the instructions, when executed by the hazardous detection system, cause a hazardous material alert to be transmitted, the computer-readable media comprising:

instructions for detecting a hazard event; and

instructions for transmitting the hazardous material alert in response to the hazard event, wherein the hazardous material alert includes information relating to the hazardous material and wherein transmitting the hazardous material alert includes sending a transmission from the vehicle that can be directly received by emergency personnel responding to the hazard event.

18. The method of claim 1 further comprising the step of:

receiving a reply transmission form a remote location, wherein the reply transmission is in response to the transmitted hazardous material alert.

19. The apparatus of claim 9 further comprising:

means for receiving a reply transmission from a remote location, wherein the reply transmission is in response to the transmitted hazardous material alert.

20. The apparatus of claim 13 further comprising:

a receiver adapted to receive a reply transmission form a remote location, wherein the reply is in response to the transmitted hazardous material alert.

**EVIDENCE APPENDIX**

None.

No evidence has been submitted under 37 CFR 1.130, 1.131, or 1.132 and no other evidence has been entered by the examiner and relied upon by Appellant in the appeal.

**RELATED PROCEEDINGS APPENDIX**

None.

There are no copies of decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences since there are no decisions listed in this section and no Related Appeals and Interferences.

**OTHER**

None.

There is no other information in support of the above items.